

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
8 January 2004 (08.01.2004)

PCT

(10) International Publication Number  
**WO 2004/003150 A3**

- (51) International Patent Classification<sup>7</sup>: **G01N 33/53**, 33/567, C07K 14/00, 16/00
- (21) International Application Number: **PCT/US2003/020147**
- (22) International Filing Date: 26 June 2003 (26.06.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
60/392,062 26 June 2002 (26.06.2002) US
- (63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:  
US 60/392,062 (CON)  
Filed on 26 June 2002 (26.06.2002)
- (71) Applicant (for all designated States except US): **YALE UNIVERSITY** [US/US]; 433 Temple Street, New Haven, CT 06511 (US).
- (72) Inventors; and  
(75) Inventors/Applicants (for US only): **STRITTMATTER, Stephen** [US/US]; 96 Tulip Lee Drive, Guilford, CT 06437 (US). **MUELLER, Bernhard** [DE/DE]; Landhausstrasse 3, 721444 Dusslingen (DE). **DEITINGHOFF, Lutz** [DE/DE]; Danziger Strasse 21, 72072 Tubingen (DE).
- (74) Agent: **MILLER, Scott, D.**; Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, PC, 666 Third Avenue, New York, NY 10017 (US).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**  
— with international search report  
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report:  
26 August 2004
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MODULATORS AND MODULATION OF THE INTERACTION BETWEEN RGM AND NEOGENIN

(57) Abstract: This invention relates to drug screening using mammalian repulsive guidance molecules and mammalian Neogenin. In addition, the invention provides for methods of preventing, alleviating or treating various disorders of the nervous system, angiogenic disorders or disorders of the cardio-vascular system and malignancies of different etiology by disrupting the interaction between RGM and Neogenin.

WO 2004/003150 A3

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/20147

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G01N 33/53, 33/567; C07K 14/00; 16/00

US CL : 435/7.1, 7.21; 530/350, 387.9

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 435/7.1, 7.21; 530/350, 387.9

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
STN, EAST; search terms: neogenin, RGM

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	VIELMETTER, J., et al. Neogenin, an Avian cell Surface Polypeptide Expressed during Terminal Neuronal Differentiation, Is Closely Related to the Human Tumor Suppressor Molecule Deleted in Colorectal Cancer. J. Cell. Bio. December 1994, Vol. 127, No. 6, pages 2009-2020, especially page 2010.	13, 14
A	MONNIER, P., et al. RGM is a Repulsive Guidance Molecule for Retinal Axons. Nature. September 2002, Vol. 419, pages 392-395.	1-12, 15-17
A, P		1-17

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&"

document member of the same patent family

Date of the actual completion of the international search

20 January 2004 (20.01.2004)

Date of mailing of the international search report

21 JUN 2004

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US

Commissioner for Patents

P.O. Box 1450

Alexandria, Virginia 22313-1450

Facsimile No. (703)305-3230

Authorized officer

Janet Andres

Telephone No. 703-308-0196